

TWO NEW SPECIES OF *PARATHESIS* (MYRSINACEAE)
FROM MESOAMERICA AND
NEOTYPIFICATION OF *PARATHESIS* *ROTHSCHUHIANA*

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ABSTRACT

Two new species of *Parathesis*, *P. pseudocalophylla* Ricketson & Pipoly from Chiapas, Mexico, and *P. pseudocrassiramea* Ricketson & Pipoly from San José, Costa Rica, are described and illustrated. Further revision of the genus has revealed the necessity of neotypifying *P. rothschuhiana* Mez.

RESUMEN

Se describen y se ilustran dos especies nuevas pertenecientes al género *Parathesis*, *P. pseudocalophylla* Ricketson et Pipoly, y *P. pseudocrassiramea* Ricketson et Pipoly, provenientes de Chiapas, México y San José, Costa Rica. Además, se neotipifica *P. rothschuhiana* Mez.

The genus *Parathesis* (A. DC.) Hook. f. contains 95 species distributed from northern Mexico to Panama, the Caribbean, and throughout the Andes from Venezuela to Bolivia and adjacent Brazil. The genus is defined by the unique glandular papillae of the corolla lobes, and bright yellow anthers. In preparing the treatment of the genus *Parathesis* for *Flora Mesoamericana*, two new species were discovered, and are described herewith.

Parathesis pseudocalophylla Ricketson & Pipoly, sp. nov. (**Fig. 1**). TYPE. MEXICO. CHIAPAS: Mpio. La Independencia, third ridge along logging road from Las Margaritas to Campo Alegre, 2,300 m, 3 Jul 1981 (fl.), *D. Breedlove 51314* (HOLOTYPE: MO; ISOTYPES: CAS, LL).

Quoad laminam bullatam inflorescentiam lateralem *P. calophyllae* valde affinis, sed ab ea ramulis pedunculis laminisque rigide rufo- (non adpresse ferrugineo-) arachnoideo- dendroideo-tomentosis, petiolis 0.7-1.5 (non 2.8-3.4) cm longis, calyce 1.6-1.8 (non 2.2-2.4) mm longo, corolla 6.1-6.3 (non 7.2-7.5) mm longa, atque staminium 4.5-4.7 (non 4.3-4.5) mm longarum, filamentis 2.9-3.1 (non 2.5-2.7) mm longis, ac antheris lanceolatis (non ovatis) 2-2.2 (nec 1.8-2.1) mm longis statim separabilis.

Trees to 6.1 m tall. **Branchlets** slender, angulate, 3-6 mm in diam., densely and stiffly rufous arachnoid and dendroid tomentose. **Leaves:** with blades chartaceous to subcoriaceous, elliptic, 8.8-14.4 cm long, 2.2-4.7 cm wide, apically acuminate, the acumen 0.6-1.6 cm long, basally acute, decurrent on the petiole, conspicuously and prominently punctate and punctate-lineate, glabrous above except scattered to densely rufous dendroid tomentose at the base and along the midrib, with scattered arachnoid and dendroid trichomes below

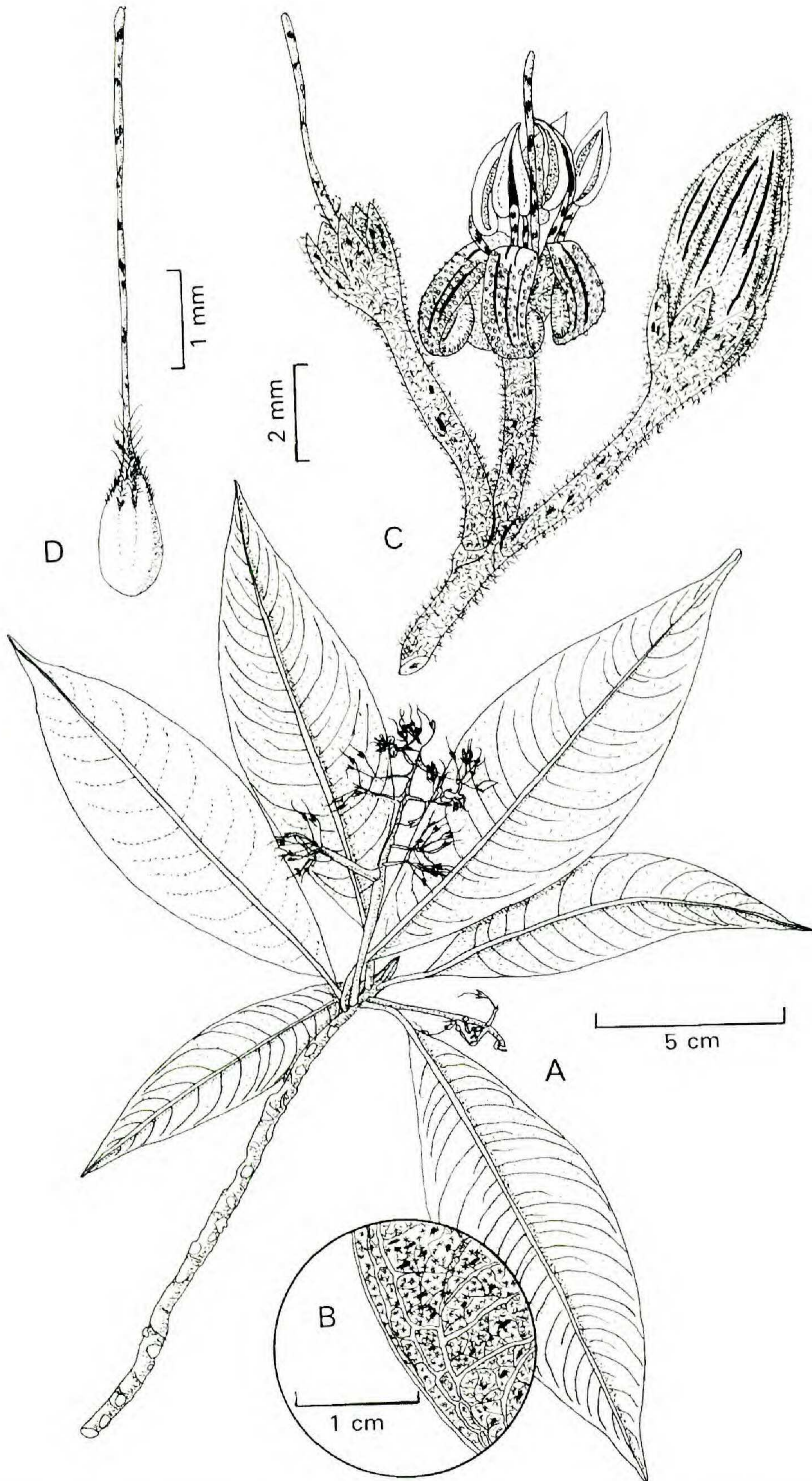


FIG. 1. *Parathesis pseudocalophylla* Ricketson & Pipoly. **A.** Flowering branch. **B.** Detail of abaxial leaf surface. **C.** Detail of inflorescence. **D.** Pistil. A–D drawn from holotype, *D. Breedlove 51314* (MO).

except densely so along the midrib, the midrib impressed above, prominently raised below, the secondary veins 20–27 pairs, slightly bullate above, prominently raised below, the margins entire; petioles slender, marginate, 0.7–1.5 cm long, vestiture as in the branchlets. **Inflorescences** lateral, pinnate to bipinnately paniculate, 3.5–9.5 cm long, 2–5 cm wide, pyramidal, shorter than the leaves, the rachis with a vestiture as in the branchlets, the branches 3–7-flowered corymbs; peduncles 2.2–5.1 cm long; inflorescence bracts unknown; inflorescence branch bracts caducous, membranous, ovate to lanceolate, 1.8–2.1 cm long, 0.7–0.9 mm wide, apically acute, conspicuously and prominently punctate and punctate-lineate, glabrous adaxially, densely arachnoid and dendroid tomentose abaxially, the veins inconspicuous, the margins entire; floral bracts similar to the inflorescence branch bracts but, 0.9–1.6 mm long, 0.3–0.5 mm wide; pedicels slender, angulate, 4.3–5.5 mm long, conspicuously and prominently punctate and punctate-lineate, vestiture as in the branchlets. **Flowers** 5-merous; calyx chartaceous, 1.6–1.8 mm long, the tube 0.3–0.5 mm long, the lobes ovate, 1.1–1.3 mm long, 0.8–1 mm wide, apically acute, conspicuously and prominently punctate and punctate-lineate, glabrous within, scattered to densely pubescent with simple trichomes, the margins entire; corolla pink, chartaceous, 6.1–6.3 mm long, the tube 0.6–0.8 mm long, the lobes lanceolate, 5.4–5.7 mm long, 1.2–1.5 mm wide, apically attenuate, conspicuously and prominently punctate and punctate-lineate, glandular-papillose within except glabrous at the very base, scattered to densely pubescent with simple trichomes, the margins entire; stamens 4.5–4.7 mm long, the filaments 2.9–3.1 mm long, the staminal tube 0.7–0.8 mm long, the apically free portion 2.1–2.3 mm long, conspicuously and prominently punctate and punctate-lineate, glabrous, the anthers yellow, erect, basifixed, lanceolate, 2–2.2 mm long, 0.7–0.9 mm wide, apically acute, apiculate, basally cordate, the connective conspicuously and prominently punctate and punctate-lineate; pistil 5.9–6.2 mm long, the ovary ovate, 1.1–1.3 mm long, inconspicuously punctate and punctate-lineate, glabrous except apically of scattered to densely villous or pilose of simple multicellular trichomes, the style 4.7–4.9 mm long, conspicuously and prominently punctate and punctate-lineate, glabrous except basally with scattered to densely villous or pilose of simple multicellular trichomes, the ovules 6–8, uniseriate. **Fruits** unknown.

Distribution.—*Parathesis pseudocalophylla* is only known from the type collection, between Las Margaritas to Campo Alegre, in the Mpio. of La Independencia, Chiapas, Mexico, growing at 2300 m elevation.

Ecology and conservation status.—*Parathesis pseudocalophylla* occurs in evergreen cloud forests, with *Pinus*, *Quercus*, *Magnolia*, *Podocarpus*, *Photinia* and *Olmediella*. Because it was collected along a logging road, it should be considered threatened.

Etymology.—The specific epithet comes from its close affinity to *Parathesis calophylla*.

Parathesis pseudocalophylla was at first confused with *P. calophylla* because of the chartaceous to subcoriaceous, slightly bullate leaves, and lateral inflorescences. However, *P. calophylla* has densely appressed ferruginous arachnoid or dendroid trichomes forming a tomentum, while in *P. pseudocalophylla*, the hairs are erect, stiff and rufous. In addition, *P. pseudocalophylla* has shorter petioles and perianth parts, but significantly longer stamens to 4.7 mm long, and larger lanceolate instead of ovate anthers to 2.2×0.9 mm.

Parathesis pseudocrassiramea Ricketson & Pipoly, sp. nov. (**Fig. 2**). TYPE. COSTA RICA. SAN JOSÉ: Cantón de Pérez Zeledón, Parque Nacional Chirripó, Cuenca Térraba-Sierpe, Estación Santa Elena, 09° 23' 36" N, 083° 35' 21" W, 1,300–1,400 m, 17 Sep 1997 (fr.), E. Alfaro 1431 (HOLOTYPE: INB; ISOTYPES: CR, MO).

Ob laminam bullatam inflorescentiam terminalem necnon ovarium dense adpresseque tomentosum *P. crassirameae* valde affinis, sed ab ea ramulis 8–10 (non 2–5) mm diametris minute papilloso-vel glandulari-granuloso- (non multicellulo-vel stellato-) tomentosis, lamina foliari 18–25 (non 5.8–18.2) cm longa, 7.9–10.5 (nec 1.8–6.3) cm lata, ad apicem acumine 1–1.8 (nec 0.3–1) cm longo, calyce 1.2–1.7 (non 1.7–1.9) mm longe, antheris 1.5–1.8 (non 2.2–2.4) mm longis perfacile recognoscitur.

Trees 6 m tall. **Branchlets** stout, angulate, 8–10 mm in diam, densely appressed papillose- or glandular-granulose-tomentose, glabrescent with age. **Leaves:** with blades coriaceous, elliptic to oblong, 18–25 cm long, 7.9–10.5 cm wide, apically obtuse, abruptly acuminate, the acumen 1–1.8 cm long, basally obtuse to rounded, decurrent on the petiole, bullate, conspicuously and prominently punctate and punctate-lineate, glabrous above, essentially glabrous below but with sparse papillae or glandular granules at the very base, the midrib impressed above, prominently raised below, the secondary veins 80–110 pairs, conspicuously impressed above, prominently raised below, the margins entire, enrolled; petioles slender, marginate, 2.8–3.6 cm long, glabrous above, appressed papillose- or glandular-granulose-tomentose below, glabrescent with age. **Inflorescences** terminal and in the axils of the uppermost leaves, pinnate to bipinnately paniculate, 27–28 cm long, 22–25 cm wide, pyramidal, as long or longer than the leaves, the rachis tomentose as in the branchlets, the branches 3–7-flowered corymbs; peduncles nearly absent to 1 cm long, the lower branches subtended by leaves; inflorescence bracts unknown; inflorescence branch bracts unknown; floral bracts caducous, membranous to chartaceous, ovate, 0.9–1.5 mm long, 0.5–1 mm wide, apically acuminate, basally sessile, conspicuously and prominently punctate and punctate-lineate, glabrous adaxially, vestiture as in the branchlets abaxially, the veins inconspicuous, the margins entire; pedicels stout, angulate, 1–2.5 mm long, conspicuously and prominently punctate and punctate-lineate, vestiture as in the branchlets. **Flowers** 5- to 6-merous; calyx chartaceous, 1.2–1.7 mm long, the tube 0.2–0.4 mm long, the lobes ovate, 0.9–1.5 mm long, 1–1.4 mm wide, apically long acuminate, conspicuously and prominently punctate and punctate-lineate, glabrous within, vestiture as in the branchlets, the margins entire; corolla color unknown, chartaceous to coria-

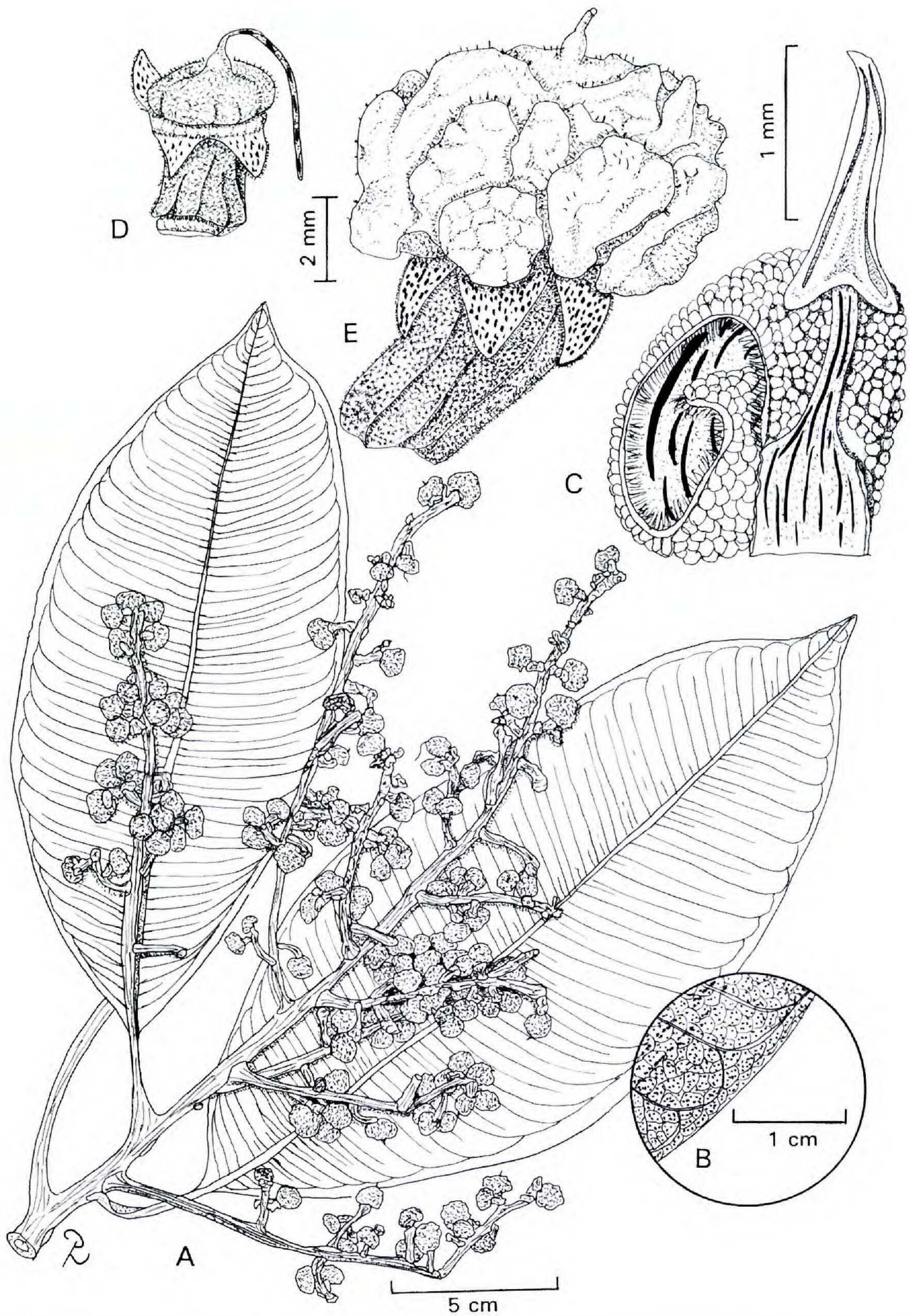


FIG. 2. *Parathesis pseudocrassiramea* Ricketson & Pipoly. A. Flowering branch. B. Detail of abaxial leaf surface. C. Detail of flower, showing corolla lobe with glandular papillae and stamen. D. Flower with immature fruit. E. Fruit. A–E drawn from isotype, E. Alfaro 1431 (MO).

ceous, 5–5.2 mm long, the tube, 0.8–1 mm long, the lobes linear-lanceolate, 4.1–4.3 mm long, 1–1.2 mm wide, apically long acuminate, conspicuously and prominently punctate and punctate-lineate, densely tomentose near the base within, the margins entire; stamens 2.8–3 mm long, the filaments 1.8–2 mm long, the staminal tube 0.5–0.7 mm long, the apically free portion 1.2–1.4 mm long, conspicuously and prominently punctate and punctate-lineate, glabrous, the anthers yellow, 1.5–1.8 mm long, 0.6–0.8 mm wide, apically acuminate, apiculate, basally sagittate, the connective, conspicuously and prominently punctate and punctate-lineate; pistil 4.3–4.6 mm long, the ovary ovate, 0.9–1 mm long, conspicuously and prominently punctate and punctate-lineate, densely tomentose with appressed simple or stellate trichomes, the style 3.4–3.6 mm long, conspicuously and prominently punctate and punctate-lineate, glabrous, the ovules unknown. **Fruits** depressed globose, 4–5 mm long, 6–9 mm wide, conspicuously and prominently punctate and punctate-lineate, densely puberulent of finely appressed simple or stellate trichomes, inconspicuously costate.

Distribution.—*Parathesis pseudocrassiramea* is only known from the type collection in the Parque Nacional Chirripó, San José, Costa Rica, growing from 1300–1400 m elevation.

Ecology and conservation status.—*Parathesis pseudocrassiramea* occurs in premontane forests. Although it seems protected in the Chirripó National Park, it is only known from the type collection and should be considered threatened at this time.

Etymology.—The specific epithet comes from its close affinity to *Parathesis crassiramea*.

The type is in fruit with few partial remnant flowers and buds. The remaining buds appear to house insects, thus bud measurements are inaccurate. The fruits are unusual in the genus and appear as a “cauliflower” shape, however this may be strictly because they were “juicy” at the time of collecting and the “wrinkled” nature may be caused by the drying process.

Parathesis pseudocrassiramea is closely related to *P. crassiramea* because of the bullate leaves, terminal inflorescences, and the ovary densely puberulent with finely appressed simple or stellate trichomes. The leaf blades of *P. pseudocrassiramea* are larger, to 25 × 10.5 cm, and essentially glabrous below but with a few papillae or glandular granules at the very base, while in *P. crassiramea* they are inconspicuously to conspicuously bizonal below with the marginal zone glabrous and the costal zone sparsely to scattered fine appressed with whitish stellate trichomes. In fruit, *P. pseudocrassiramea* may also be confused with *P. cartagoana*; however, the vestiture of the lower leaf surface is inconspicuously or conspicuously bizonal and the marginal zone is strongly appressed with dense, canescent stellate or dendroid trichomes and the costal zone has a mixture of appressed, dense, canescent or ferruginous to tomentose stel-

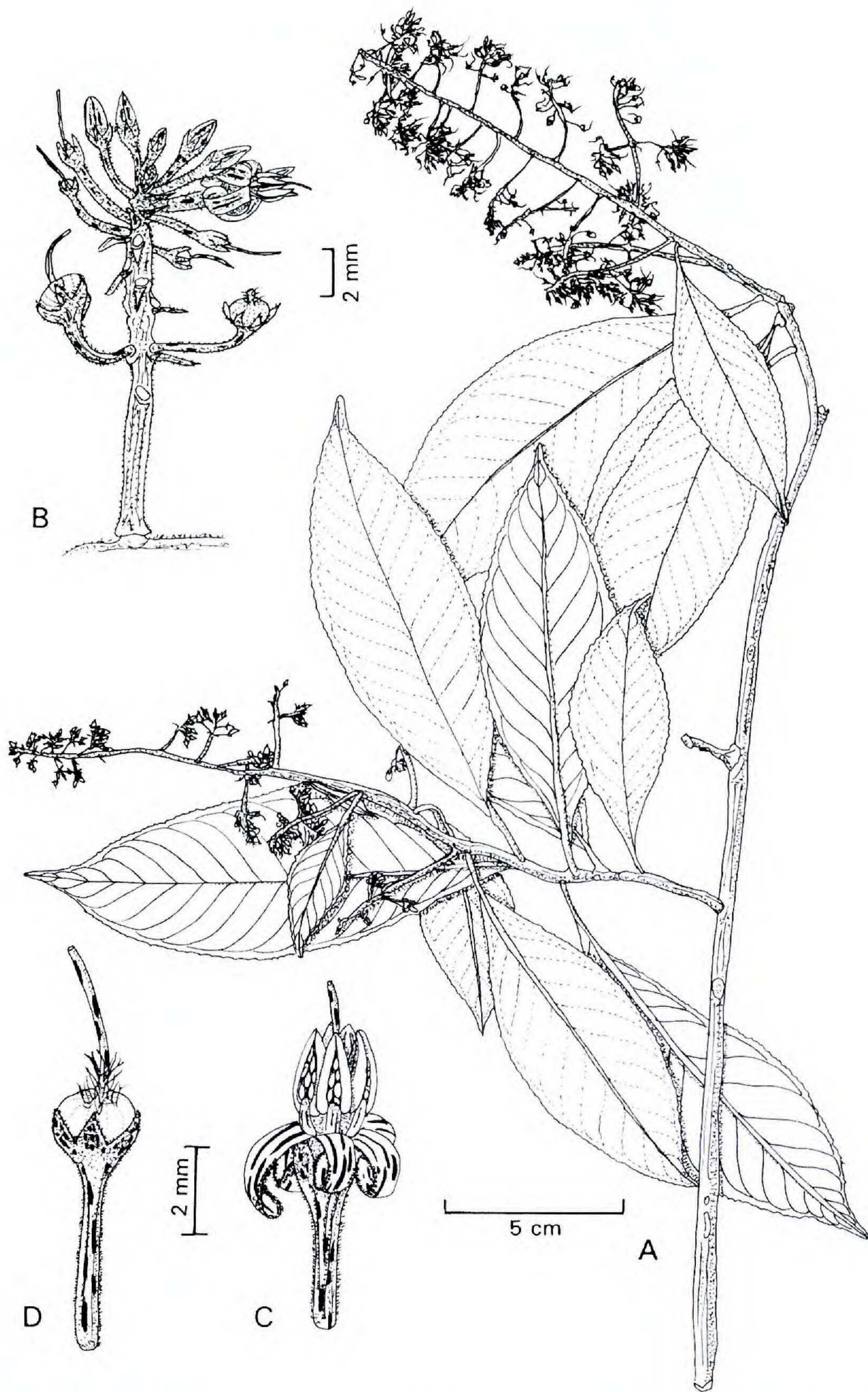


FIG. 3. *Parathesis rothschuhiana* Mez. **A.** Flowering branch. **B.** Detail of inflorescence. **C.** Flower. **D.** Fruit. A–D drawn from J. Atwood & D. Neill 14 (MO).

late and/or dendroid trichomes with scattered erect reddish dendroid trichomes, which immediately separate the two taxa.

In addition to the aforementioned novelties, revision of the genus disclosed the necessity of neotypifying *Parathesis rothschuhiana* Mez.

***Parathesis rothschuhiana* Mez**, Pflanzennr. IV. 236 (Heft 9):176. 1902. (**Fig. 3**). TYPE. NICARAGUA. MANAGUA: Grenze der Berg und savannenregion, 550 m, 9 Mar 1894 (fl., fr.), *E. Rothschuh* 531 (HOLOTYPE: B destr. 1943, F neg. 4875); NEOTYPE. NICARAGUA. NUEVA SEGOVIA: a la orilla del Río Achuapa al S del Cerro Mogotón, 1,500 m, 12 Jun 1975 (fl.), *J. Atwood & D. Neill* 14 (NEOTYPE, here selected: MO; ISONEOTYPE: FTG).

Ardisia fusca Oerst. var. *glabrata* Oerst., Vidensk. Meddel. Dansk Naturhist. Fören Kjøbenhavn 1861:128. 1862. TYPE. NICARAGUA. JINOTECA: sylvia humidis monte Pantasmo, [13° 28' N, 85° 54' W], 3,000–4,000 leg [914–1,219 m], Jan 1848 (fl.), *A. Oersted* 37A (HOLOTYPE: C; ISOTYPE: LL).

The holotype of *Parathesis rothschuhiana* was destroyed at Berlin (B) in March 1943, thus necessitating the need to locate an isotype. Unfortunately, the *E. Rothschuh* specimens were not widely distributed, the only other institutions known to house his material are Leiden (L) and the Smithsonian (US). Searches of these herbaria, as well as the National Herbarium of Nicaragua (HNMN), have failed to locate a duplicate specimen. In the absence of any original type material a neotype must be selected. The *J. Atwood & D. Neill* 14 material is in good condition with mature flowers and young fruits. Unfortunately, a search by Alfredo Guijalva (HNMN) of Nicaraguan herbaria has failed to locate a duplicate of this specimen. Thus we hereby designate the *J. Atwood & D. Neill* 14 sheet at MO as the neotype.

Oersted (1862) was the first to recognize the unique characters of this taxon, when he described *Ardisia fusca* Oerst. var. *glabrata* Oerst. However, Mez (1902) misunderstood the material and synonymized the variety under *Parathesis fusca* (Oerst.) Mez and failed to recognize the similarities between the type of *Ardisia fusca* Oerst. var. *glabrata* Oerst. with his new species *P. rothschuhiana* Mez. Lundell (1966) in his revision of the genus was the first to synonymize the taxon under *Parathesis rothschuhiana* but was unable to locate any type material.

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